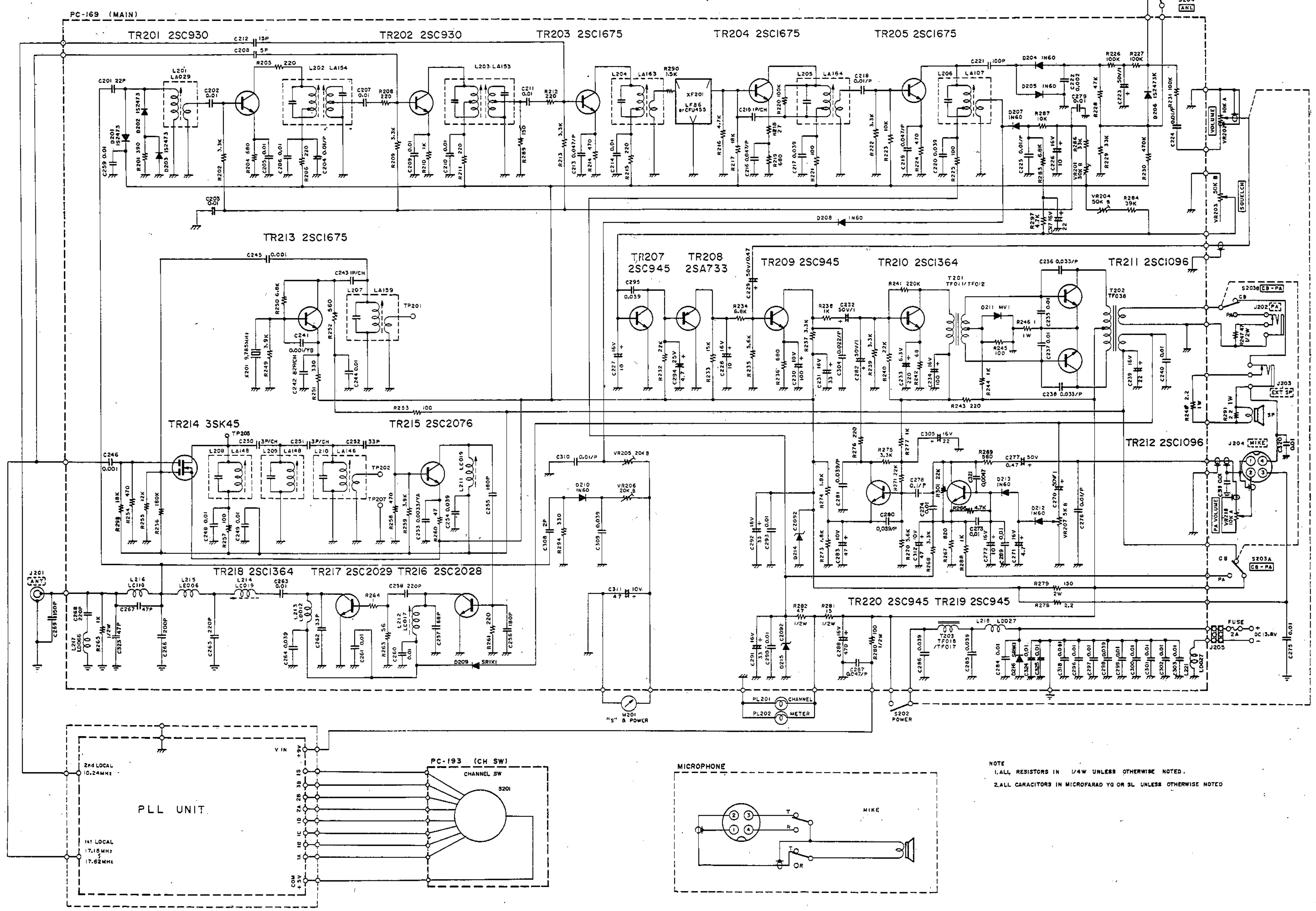
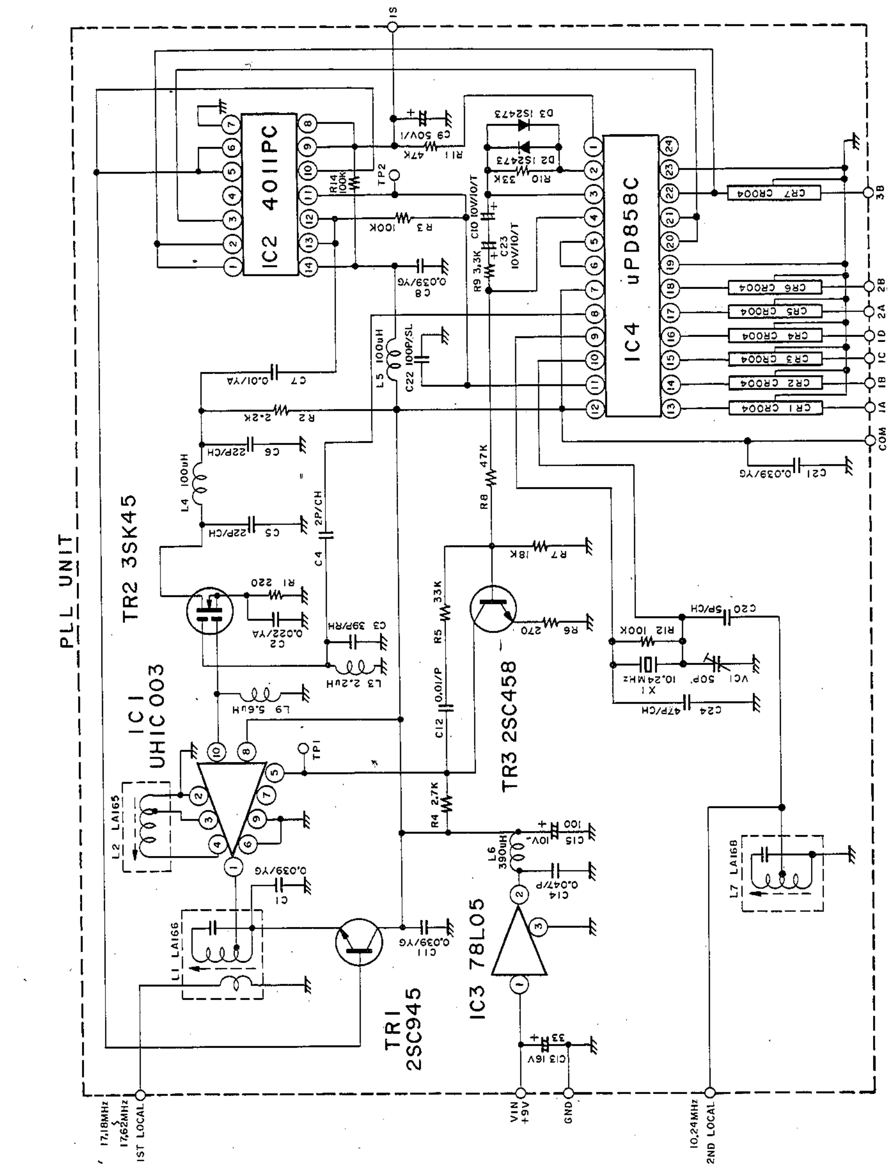
MAIN CIRCUIT DIAGRAM FOR COBRA 77X



PLL UNIT CIRCUIT DIAGRAM FOR COBRA 77X



BILL OF MATERIAL FOR COBRA 77X

TRANSISTORS, FET, IC, & DIODES

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
TR-208	Transistor 2SA733-Q	177-018-9-001
TR-3	Transistor 2SC458-C	176-048-9-002
TR-201,202	Transistor 2SC930-D	176-060-9-001
TR-207,209,219,220	Transistor 2SC945A-P	176-060-9-003
TR-211,212	Transistor 2SC1096-4ZL	172-038-9-003
TR-210	Transistor 2SC1364-6	176-054-9-001
TR-203,204,205,213	Transistor 2SC1675-M	176-060-9-002
TR-216	Transistor 2SC2028-B/20	172-038-9-001
TR-217	Transistor 2SC2029-B/10	172-038-9-002
TR-215	Transistor 2SC2076-CB	176-060-9-004
R-214,2	FET 3SK45-B	182-038-9-001
IC-1	Integrated Circuit UHIC-003	307-108-9-001
IC-2	Integrated Circuit 4011-PC	307-095-9-002
IC-3	Integrated Circuit 78L05-AV	307-095-9-003
IC-4	Integrated Circuit UPD858C	307-095-9-004
D-204,205,207,208, 210,212,213	Diode IN-60AM	150-014-9-001
D-201,202,203	Diode 1S2473	151-059-9-001
D-206	Diode (Forming) 1S2473K	151-060-9-001
D-209,216	Diode SR1K-1	151-040-9-003
D-214,215	Zener Diode CZ-092	152-051-9-001
D-211	Varistor MV-1	151-049-9-002

COILS & TRANSFORMERS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
L-201	Coil LA-029	066-017-9-001
L-206	Coil LA-107	060-022-9-003
L-210	Coil LA-146	066-025-9-004
L-208,209	Coil LA-148	046-017-9-001
L-203	Coil LA-153	066-025-9-002
L-202	Coil LA-154	066-025-9-001
L-207	Coil LA-159	066-025-9-003
L-204	Coil LA-163	060-022-9-001
L-205	Coil LA-164	060-022-9-002
L-1	Coil LA-166	066-025-9-005
L-2	Coil LA-165	044-046-9-001
L-7	Coil LA-168	044-039-9-002
L-212	Coil LC-017	044-028-9-004
L-211,214	Coil LC-019	044-028-9-002
L-216	Coil LC-110	041-078-9-001
L-213	Coil LD-012	044-028-9-003
L-218,221	Coil LD-027	042-011-9-001
L-217	Coil LD-066	042-019-9-001
L-215	Coil LE-006	044-028-9-001
L-3	Micro Inductor LF-4 2.2μH	041-056-9-002
L-4,5	Micro Inductor LF-1 100μH	041-078-9-002
L-6	Micro Inductor LF-1 390μH	041-078-9-003
L-9	Micro Inductor LF-4 5.6μH	041-078-9-004

COILS & TRANSFORMERS (Continued)

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
T-203	Choke Transformer TF-017	044-028-9-006
T-201	Input Transformer TF-011	061-022-9-001
T-202	Output Transformer TF-038	061-022-9-002

VARIABLE RESISTORS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
VR-205,206	Semi-fixed Resistor RV-103 20KB	008-209-9-010
VR-201,204	Semi-fixed Resistor RV-103 50KB	008-209-9-008
VR-207	Semi-fixed Resistor RV-102 5KB	008-284-9-001
VR-208	Variable Resistor RV-055 10K-A	008-187-9-002
VR-202	Variable Resistor RV-027 10K-A	008-187-9-001
VR-203	Variable Resistor RV-071 50KB	008-227-9-003

RESISTORS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
R-246	Metalized Resistor 1 ohm 1W	013-002-9-002
R-248	Metalized Resistor 2.2 ohm 1W K	013-011-9-001
R-291	Metalized Resistor 22 ohm 1W K	013-011-9-002
R-279	Metalized Resistor 150 ohm 1W K	013-011-9-003
R-281	Car Comp. Resistor 15 ohm 1/2W	001-102-5-150
R-282,247	Car Comp. Resistor 47 ohm 1/2W	001-102-5-470
R-280	Car Comp. Resistor 100 ohm 1/2W	001-102-5-101
R-265	Car Comp. Resistor 1K ohm 1/2W	001-102-5-102
R-297	Carbon Film Resistor 4.7K ohm 1/4W J	002-104-5-472
R-283	Carbon Film Resistor 6.8K ohm 1/4W J	002-104-5-682
R-287	Carbon Film Resistor 10K ohm 1/4W J	002-104-5-103
R-232	Carbon Film Resistor 22K ohm 1/4W J	002-104-5-223
R-264	Carbon Film Resistor 1 ohm 1/4W J	002-104-5-010
R-278	Carbon Film Resistor 2.2 ohm 1/4W J	002-104-5-229
R-263	Carbon Film Resistor 56 ohm 1/4W J	002-104-5-560
R-218	Carbon Film Resistor 27 ohm 1/4W J	002-104-5-270
R-260	Carbon Film Resistor 47 ohm 1/4W J	002-104-5-470
R-242	Carbon Film Resistor 68 ohm 1/4W J	002-104-5-680
R-252,269	Carbon Film Resistor 560 ohm 1/4W J	002-104-5-561
R-257,221,225,245,253	Carbon Film Resistor 100 ohm 1/4W J	002-104-5-101
R-289	Carbon Film Resistor 150 ohm 1/4W J	002-104-5-151
R-212,215,243,261,276 205,206,208,211	Carbon Film Resistor 220 ohm 1/4W J	002-104-5-221
R-6	Carbon Film Resistor 270 ohm 1/4W J	002-104-5-271
R-251,294	Carbon Film Resistor 330 ohm 1/4W J	002-104-5-331
R-201	Carbon Film Resistor 390 ohm 1/4W J	002-104-5-391
R-214,224,254,258	Carbon Film Resistor 470 ohm 1/4W J	002-104-5-471
R-204,219,236	Carbon Film Resistor 680 ohm 1/4W J	002-104-5-681
R-267	Carbon Film Resistor 820 ohm 1/4W J	002-104-5-821
R-277,210,238,244,288	Carbon Film Resistor 1K ohm 1/4W J	002-104-5-102
R-290	Carbon Film Resistor 1.5K ohm 1/4W J	002-104-5-152
R-273,274	Carbon Film Resistor 1.8K ohm 1/4W J	002-104-5-182
R-2	Carbon Film Resistor 2.2K ohm 1/4W J	002-104-5-222
R-4	Carbon Film Resistor 2.7K ohm 1/4W J	002-104-5-272
R-9,202,213,222,239 275,268,237,209	Carbon Film Resistor 3.3K ohm 1/4W J	002-104-5-332
R-249,259	Carbon Film Resistor 3.9K ohm 1/4W J	002-104-5-392
R-216,266	Carbon Film Resistor 4.7K ohm 1/4W J	002-104-5-472
R-235,270	Carbon Film Resistor 5.6K ohm 1/4W J	002-104-5-562
R-250,234	Carbon Film Resistor 6.8K ohm 1/4W J	002-104-5-682

RESISTORS (Continued)

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
R-223	Carbon Film Resistor 10K ohm 1/4W J	002-104-5-103
R-255	Carbon Film Resistor 12K ohm 1/4W J	002-104-5-123
R-233	Carbon Film Resistor 15K ohm 1/4W J	002-104-5-153
R-7,217,293	Carbon Film Resistor 18K ohm 1/4W J	002-104-5-183
R-301,240,271	Carbon Film Resistor 22K ohm 1/4W J	002-104-5-223
R-284	Carbon Film Resistor 39K ohm 1/4W J	002-104-5-393
R-286,229,5,10	Carbon Film Resistor 33K ohm 1/4W J	002-104-5-333
R-228,8,11	Carbon Film Resistor 47K ohm 1/4W J	002-104-5-473
R-3,12,14,220,226, 227,231	Carbon Film Resistor 100K ohm 1/4W J	002-104-5-104
R-256	Carbon Film Resistor 180K ohm 1/4W J	002-104-5-184
R-241	Carbon Film Resistor 220K ohm 1/4W J	002-104-5-224
R-230	Carbon Film Resistor 470K ohm 1/4W J	002-104-5-474

CAPACITORS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
C-229,277	Capacitor, Electrolytic 0.47μF 50V	022-157-9-001
C-223,232,282,270	Capacitor, Electrolytic 1μF 50V	022-157-9-002
C-271,294	Capacitor, Electrolytic 4.7μF 25V	022-157-9-003
C-226,227,228,272	Capacitor, Electrolytic 10μF 16V	022-157-9-004
C-239,305,317	Capacitor, Electrolytic 22μF 16V	022-157-9-005
C-231,291,292,13	Capacitor, Electrolytic 33μF 16V	022-157-9-006
C-283,311,312	Capacitor, Electrolytic 47μF 10V	022-157-9-007
C-230,15	Capacitor, Electrolytic 100μF 10V	022-157-9-008
C-234	Capacitor, Electrolytic 100μF 16V	022-151-9-009
C-233	Capacitor, Electrolytic 220μF 63V	022-157-9-010
C-288	Capacitor, Electrolytic 470μF 16V	022-157-9-011
C-10,23	Tantalum Capacitor 10μF 10V	027-025-9-001
C-215,243	Ceramic Capacitor 1pF 50V C CH	020-180-9-001
C-4	Ceramic Capacitor 2pF 50V C CH	020-180-9-002
C-250,251	Ceramic Capacitor 3pF 50V C CH	020-180-9-003
C-20	Ceramic Capacitor 5pF 50V C CH	020-180-9-004
C-5,6	Ceramic Capacitor 22pF 50V K CH	020-180-9-005
C-24	Ceramic Capacitor 47pF 50V K CH	020-180-9-006
C-242	Ceramic Capacitor 82pF 50V K CH	020-180-9-007
C-308	Ceramic Capacitor 2pF 50V C SL	020-180-9-008
C-208	Ceramic Capacitor 5pF 50V C SL	020-180-9-009
C-212	Ceramic Capacitor 15pF 50V K SL	020-180-9-010
C-201	Ceramic Capacitor 22pF 50V K SL	020-180-9-011
C-252,262	Ceramic Capacitor 33pF 50V K SL	020-180-9-012
C-263,323	Ceramic Capacitor 47pF 50V K SL	020-180-9-013
C-269	Ceramic Capacitor 150pF 50V K SL	020-180-9-014
C-257	Ceramic Capacitor 68pF 50V K SL	020-180-9-015
C-22,221	Ceramic Capacitor 100pF 50V K SL	020-180-9-016
C-2,66	Ceramic Capacitor 200pF 50V K SL	020-180-9-017
C-255,256	Ceramic Capacitor 180pF 50V K SL	020-180-9-018
C-265,258,268	Ceramic Capacitor 220pF 50V K SL	020-180-9-019
C-245,246,318	Ceramic Capacitor 0.001μF 25V YG	020-180-9-020
C-222	Ceramic Capacitor 0.0022μF 25V YG	020-180-9-021
C-321	Ceramic Capacitor 0.0047μF 25V YG	020-180-9-022
C-320,324,325,202,261,263, 273,274,284,289,290,293, 296,297,299,203,205,206, 207,209,210,211,214,235, 237,240,244,248,249,260,	Ceramic Capacitor 0.01μF 25V Z YG	020-180-9-023

CAPACITORS (Continued)

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
C-300,301,302,303,279,259, 275,319		
C-217,220,254,264,1,8, 11,21,293,285,286,309, 298	Ceramic Capacitor 0.039μF 25V Z YG	020-180-9-024
C-241	Ceramic Capacitor 0.001μF 50V YB	020-180-9-025
C-253	Ceramic Capacitor 0.0033μF 50V YA	020-180-9-026
C-7	Ceramic Capacitor 0.01μF 50V YA	020-180-9-027
C-2	Ceramic Capacitor 0.022μF 50V YA	020-180-9-028
C-3	Ceramic Capacitor (Temperature control) 39pF 50V	020-180-9-029
C-278	Mylar Capacitor 0.1μF 50V K	025-121-9-001
C-12,224,204,218,225, 276,310	Mylar Capacitor 0.01μF 50V K	025-121-9-002
C-304	Mylar Capacitor 0.022μF 50V K	025-121-9-003
C-236,238	Mylar Capacitor 0.033μF 50V K	025-121-9-004
C-280,281	Mylar Capacitor 0.039μF 50V K	025-121-9-005
C-213,216,219,287,14	Mylar Capacitor 0.047μF 50V K	025-121-9-006
VC-1	Trimmer Condenser 50pF CV-024	028-036-9-001
CR-1,2,3,4,5,6,7	Composite Parts HA-002, CR-004	523-162-9-001

CRYSTALS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
X-201	Crystal QX-070 9.785MHz	132-028-9-001
X-1	Crystal QX-074 10.24MHz	132-027-9-001

MISCELLANEOUS

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
XF-201	Ceramic Filter FL-019 LF-B6	140-015-9-001
S-201	Rotary Switch	083-224-9-001
S-203,204	Slide Switch SW-054	084-051-9-001
SP	Speaker SP-003	580-013-9-001
M-201	Meter MT-018	320-078-9-001
	Microphone M5-046	562-006-9-001
J-5	Jack JK-052	773-079-9-002
J-201	Antenna Connector JK-035	772-027-9-001
J-202,203	Jack (Fiver) JK-010	773-079-9-003
J-204	Jack (Metacon) JK-028	773-072-9-001
PG-016	Plag PG-016	775-039-9-001
TP-1,2	Check Terminal	757-032-9-001
TP-207	Check Terminal	757-028-9-001
TP-203,201,202	Check Terminal	345-041-9-001
PL-201	Pilot Lamp (Red)	400-035-9-004
PL-202	Pilot Lamp	400-046-9-001
	Fuse FS-001 2A	191-251-9-002
	Wire Clamper YY-047	380-278-9-001
For TR-211,212	Insulator YD-003-001	347-073-9-001
For TR-216,217	Insulator YD-024	347-073-9-002
	Connector Pin TP-026	757-035-9-001
	Chassis SPCC	257-093-9-001
	Case (Upper)	272-112-9-001
	Case (Lower)	272-113-9-001
	Bracket SPCC	251-187-9-001
	Heat sink	747-044-9-001

MISCELLANEOUS (Continued)

CIRCUIT SYMBOL	DESCRIPTION	PART NO.
	Mike Hanger	741-074-9-001
	Shield Case	256-059-9-001
	Shield Case (Cover)	256-060-9-001
	Front Panel	255-152-9-001
	Channel Knob	751-149-9-001
	Knob	751-146-9-001
	Channel Disc	260-120-9-001
	Lamp Holder (Lubber)	752-011-9-001
	Front Plate	260-120-9-002
	FCC Plate	260-120-9-003
	Mounting Screw BsBM	634-044-9-001
	Illumination Board	763-088-9-001
	Serial No. label	– NA –
	Warning label	483-255-9-001
	Transmitter Card	492-044-9-001
	Production No. label	– NA –
	Wool Tac	763-069-9-002
	Rubber Washer t=2.0	347-066-9-001
	Rubber Washer t=1.0	347-066-9-002
	Speaker Net (Grill)	763-069-9-003
	Felt Washer	347-066-9-003
	Cushion	502-094-9-001
	Pan Screw M3x6	634-081-9-001
	Bind Screw M2x4	634-069-9-002
	Bind Screw M3x8	634-067-9-001
	Tapping Screw 3.5x8	710-021-9-001
	Tapping Screw 5x10	710-021-9-002
	Bind Tapping Screw 3x6 Ni	710-021-9-004
	Pan Tapping Screw 3x6 ZMC	710-034-9-001
	Lagged Washer 3.5φ	731-041-9-001
	Lagged Washer 5φ	731-041-9-002
	CS Type Washer 10φ	731-041-9-003
	Poly Bag (for Set) 270x400x0.1	502-100-9-001
	Poly Bag (for Accessory) 100x120x0.05	502-100-9-002
	Poly Bag (for Mike) 110x600x0.05	502-100-9-003
	Poly Bag (for DC Cord) 120x280x0.05	502-100-9-004
	Poly Bag (for Documents) 170x320x0.05	502-100-9-005
	Styroform (Front)	503-112-9-001
	Styroform (Back)	503-112-9-002
	Display Box	500-316-9-001
	Double Carton	500-317-9-001
	Service Station Card	492-042-0-000
	Instruction Manual	480-200-9-001
	Composite: Consisting of;	499-109-9-001
	Schematic Diagram	488-190-9-001
	Parts List	488-190-9-002
	Warranty Card	491-191-9-001
	FCC Application Card	492-041-9-001
	FCC Temporary License Form	492-046-9-001
	FCC Rules Part 95	492-047-9-001
	Printed Circuit Board PC-171AB	302-244-9-001
	Printed Circuit Board PC-169AD	302-245-9-001
	Printed Circuit Board PC-193AA	302-246-9-001

536-077-0-000

Printed in Japan